Transmission Reliability Research Review

Overview of Real Time Grid Reliability Management

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Real Time Grid Reliability Management

- Focus: Develop real time grid and market operations monitoring and performance tools supported by advanced security and control software

- Program Goal: By 2012, develop a portfolio of real time technologies and decision support tools that combine to create an automatic switchable grid in a major region that maximizes electric system utilization, automatically mitigates system disturbances, ensures reliability of the grid operations, and efficient electricity markets.

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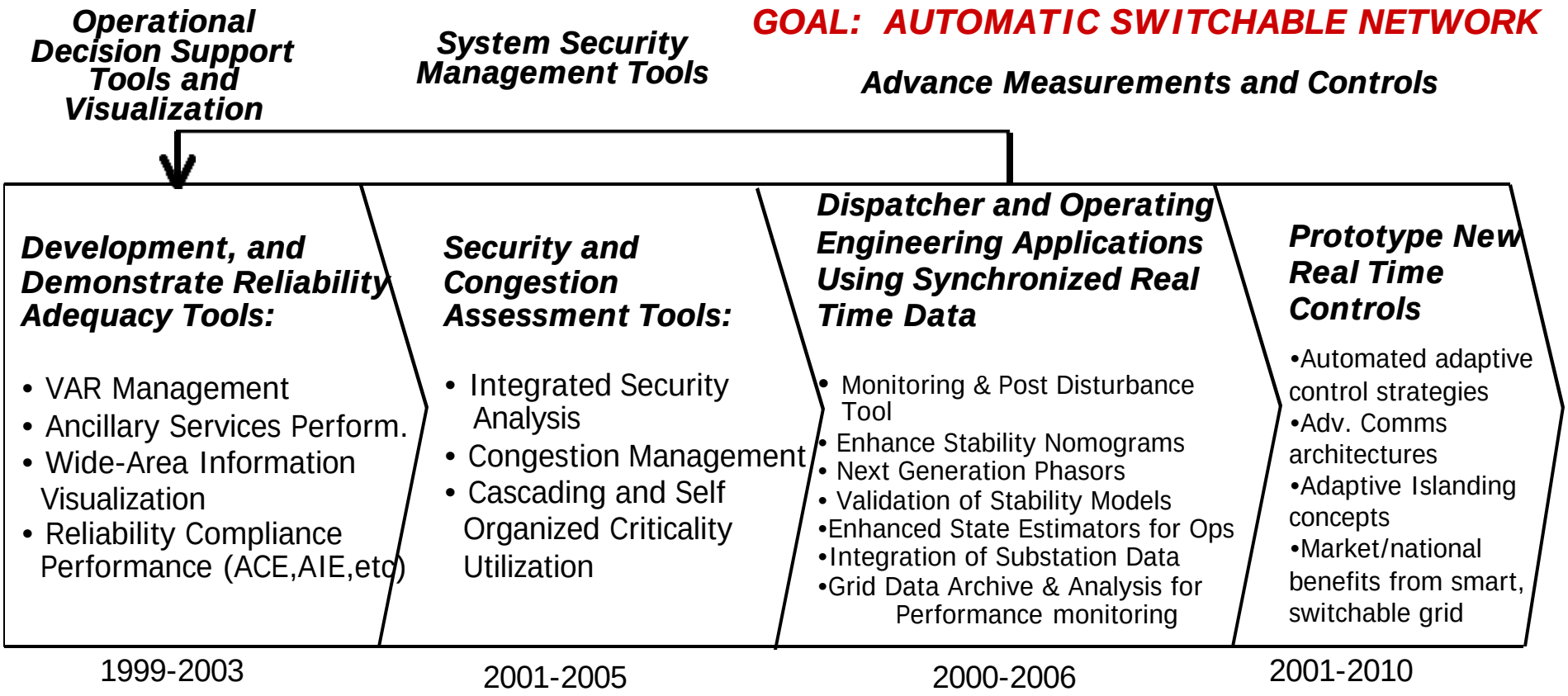

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Real Time Grid Reliability Management

Objective:

Provide a continuing output of useful grid reliability technologies and tools that are responsive to operational challenges posed by utility restructuring and development of competitive markets.

Approach:

- Develop, test, evaluate, and demonstrate new real-time performance monitoring, reliability adequacy, and security analysis schemes, tools and operational procedures along with real-time control technologies based on advanced measurements
- Improve information visualization systems and their availability
- Develop performance metrics to measure and monitor grid reliability for transmission and distribution systems
- Disseminate these operational tools and processes to industry

Presentations

NERC Tools – Wide Area Real Time Monitoring – Carlos Martinez, Electric Power Group

Real Time Tools Outreach – Carlos Martinez, Electric Power Group

Eastern Interconnection Phasor Demonstration – Carl Imhoff, PNNL

Roadmap for Real Time Control – Jeff Dagle, PNNL

Overview of Framework for Tools to Archive and Analyze Real Time Grid Data – Carlos Martinez, Electric Power Group

WAMS Outreach Projects in FY03 – John Hauer, PNNL

Presentations

WAMS Outreach Project: Sharing of Knowledge & Technology – John Hauer, PNNL

WAMS Outreach Project: WECC Model Validation – John Hauer, PNNL

Integrated Security Analysis – Pete Sauer, PSERC/University of Illinois

Feasibility of Real Time Control – Anjan Bose, PSERC/Washington State University

Criticality and Risk of Large Cascading Blackouts – Ian Dobson, PSERC/University of Wisconsin and Ben Carreras, ORNL